

THE EU-LIST OF PRIORITY SUBSTANCES

A NEW STRATEGY AGAINST WATER POLLUTION

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**Decision establishing the list
of priority substances
(No. 2477/2001/EC)**



**Annex X
of Water Framework Directive
(2000/60/EC)**

33 priority substances

11 priority hazardous substances:

Emissions, discharges and losses should be ceased not later than in 20 years

14 priority substances under review:

Proposal by EU-Commission by latest December 2002 which ones are priority hazardous

8 priority substances:

Progressively reduce the discharges, emissions and losses

Annex X of WFD: List of Priority Substances

- 1. Alachlor**
- 2. Benzene**
- 3. Chlorfenvinphos**
- 4. 1,2-Dichloroethane**
- 5. Dichloromethane**
- 6. Fluoroanthene**
- 7. Nickel and its compounds**
- 8. Trichloromethane**

Priority hazardous substances

- 9. Brominated Diphenylethers**
- 10. Cadmium and its compounds**
- 11. C₁₀₋₁₃-chloroalkanes**
- 12. Hexachlorobenzene**
- 13. Hexachlorobutadiene**
- 14. Hexachlorocyclohexane (Gamma-Isomer, Lindane)**
- 15. Mercury and its compounds**

Annex X of WFD: List of Priority Substances

- | | |
|---|--|
| 16. Nonylphenols
(4-(para)-Nonylphenol) | <u>Priority hazardous substances</u>
<u>under review</u> |
| 17. Pentachlorobenzene | 20. Anthracene |
| 18. Polyaromatic Hydrocarbons
(PAH)
(Benzo(a)pyrene)
(Benzo(b)fluoranthene)
(Benzo(g,h,i)perylene)
(Benzo(k)fluoranthene)
(Indeno(1,2,3-cd)pyrene) | 21. Atrazine
22. Chlorpyrifos
23. Di(2-ethylhexyl)phthalate
(DEHP) |
| 19. Tributyltin compounds
(Tributyltin-Cation) | 24. Diuron
25. Endosulfan
(Alpha-Endosulfan)
26. Isoproturon
27. Lead and its compounds |

Annex X of WFD: List of Priority Substances

28. Naphthalene

**29. Octylphenol
(Para-tert. Octylphenol)**

30. Pentachlorophenol

31. Simazine

**32. Trichlorobenzenes
(1,2,4-Trichlorobenzene)**

33. Trifluralin

Most important !!

- ... The European Commission shall at least submit proposals for**
- emission controls (ECs) for point sources and**
 - environmental quality standards (EQSs) (water, sediment, biota)**

**According to article 16 (7) and 16(8)
by December 2003**

(... or by the MS five years after inclusion on the list)

Elements of „good status“ of surface waters

Biological quality components

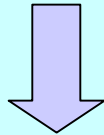
Supported by

Hydromorphological quality

components

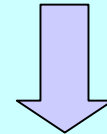
and

**general chemical quality
components (P_H, T, conductivity)
+ specific pollutants**

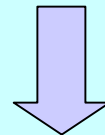


good ecological status

**Priority substances and
„relevant“ substances of
other directives**



Good chemical status



good status

The 18 substances of Annex IV of WFD regulated by the daughter directives of Directive 76/464/EEC („Dangerous Substances Directive“):

- **Mercury**
- **Cadmium**
- **Hexachlorocyclohexan**
- **DDT**
- **Aldrin, Dieldrin, Endrin, Isodrin (Drines)**
- **Tetrachloromethane**
- **Trichloromethane (Chloroform)**
- **Trichloroethene (TRI)**
- **Tetrachloroethene (PER)**
- **1,2-Dichloroethane (EDC)**
- **Hexachlorobenzene (HCB)**
- **Hexachlorobutadiene (HCBd)**
- **Trichlorobenzene (3)**

1. **Nitrate (NO_3^-): 50 mg/l**
91/676/EEC: Protection of waters against pollution caused by nitrates from agricultural sources.

2. **...p_H, T, NH_4^+ , Total Zn,.....**
(14 EQS)
78/656/EEC: Quality of Freshwater to support fish life. This Directive will be repealed in 2013 according to article 22 of WFD.

3. **... colour, fluoride, nitrate, cyanide, heavy metals, PAH, phenols, total pesticides**
(46 EQS)
75/440/EEC: Surface Water intended for the abstraction of water. This Directive will be repealed in 2007 according to article 22 of WFD

4. **... p_H, T, halogenated organic compounds, heavy metals, ...**
79/923/EEC on Quality required to shellfish waters.
This Directive will be repealed in 2013 according to article 22 of WFD

Directive 76/464/EC: Dangerous Substances Directive

Article 7: EQSs and Programmes for List II substances

Germany: 99 substances or groups of substances

EQSs are exceeded!!



Find the causes!!

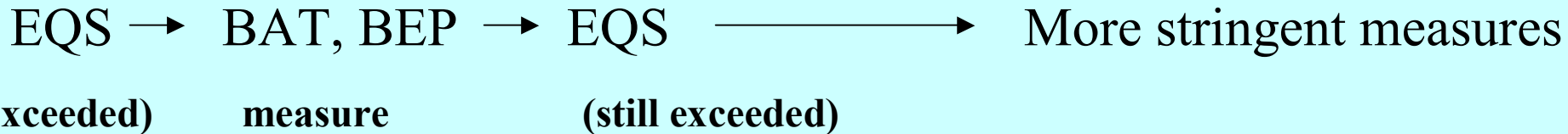
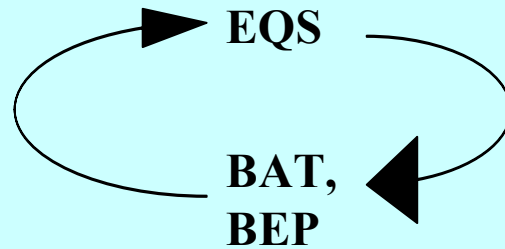


- a) Examination of discharge permits and results of compliance checking for industrial discharges. In addition the results of the European Pollutant Emission Register (EPER) might help!!**
- b) Inquiry of relevant industrial discharges if the substance could be present in their waste waters!!**
- c) Municipal waste water treatment plants discharging the substance?**
- d) Use of the substance in plant protection products in the catchment area?**
- e) Existence of geogenic pollutant loads?**
- f) Existence of old dump sites or old existing abandoned industrial sites which influence water?**
- g) Existence of transboundary pollution/pollution generated upstream?**

Measures

Point sources: best available techniques (BAT)

diffuse sources: best environmental practice (BEP)



„combined approach“

(article 10 of WFD)